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A SELECTED BIBLIOGRAPHY OF ACOUSTICS IN FISHERIES RESEARCH AND RELATED FIELDS

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A SELECTED BIBLIOGRAPHY OF ACOUSTICS IN FISHERIES RESEARCH AND RELATED FIELDS

compiled by

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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PREPARATION OF THIS DOCUMENT

This bibliography was prepared to help researchers and field workers involved with acoustic research in fisheries in retrieving information of particular interest to them. The references include both published and unpublished material. The latter consists mostly of FAO project and meeting reports, cruise reports and mimeographed contributions to the Council Meetings of the International Council for the Exploration of the Sea (ICES).

A preliminary version was prepared as an FAO contribution to the ICES/FAO Symposium on Fisheries Acoustics held from 21 to 24 June 1982 at Bergen, Norway, as FAO Fish.Circ., (748). This revised edition includes corrections received from participants at the Symposium. Where possible references have been checked against originals and a subsequent computer search.

A computer search of 7 data bases was carried out in May 1981 and October 1984 by Mrs. G. Medichini, and further research and editing was done by Ms. Gloria A. Soave, both of the Fishery Information, Data and Statistics Service of the Fisheries Department. The typing on the word processor was done by Ms. D. Dearing. Their contributions and the assistance rendered by colleagues of the Inland Water Resources and Aquaculture Service of FAO and members of the ACMRR Ad hoc Group of Experts on the Facilitations of Acoustic Research in Fisheries are gratefully acknowledged.

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A vehicle for distribution of short or ephemeral notes, lists, etc., including provisional versions of documents to be issued later in other series.

ABSTRACT

A bibliographical list of 1 793 selected references on acoustics in fisheries, fisheries research and related sciences, with a code system referring to 14 major categories.

INTRODUCTION

The rapid expansion of the use of acoustic instruments in commercial fisheries and fisheries research is reflected in the large number of papers and articles appearing on the subject.

The results of acoustic surveys for fish stock assessment and monitoring and target strength measurements on a variety of species are also of interest to scientists dealing with different stocks and survey conditions. Developments in acoustic instrumentation and calibration in oceanography and other fields of underwater acoustics are of interest to acoustic and electronic engineers.

FAO has promoted the use of acoustic survey techniques for more than 15 years in close collaboration with leading research institutions and ACMRR.

The need for an up-to-date list of publications and reports for the use of those involved in fisheries and fisheries research was apparent and a more recent publication than the one by Dang and Andrews (1971) did not exist. A preliminary version of this bibliography was presented at the ICES/FAO Symposium on Fisheries Acoustics, held in Bergen, Norway in June 1982, as FAO Fish.Circ., (748).

The task of producing this bibliography was much greater than envisaged despite the use of computerized data bases and word processor, consequently the bibliography is not yet completely indexed. However, the following code gives an indication of the contents by main subject:

1. References, meetings, reviews, training courses.
2. Principles, manuals, text books.
3. Engineering, design and calibration of instruments.
4. Fish and fish schools as acoustic targets (including shrimp, squid, etc.).
5. Procedures of surveys (design, statistics, data processing).
6. Results of biomass surveys.
7. Acoustics in studies of behaviour (migration, sonic tags).
8. Scattering layers, plankton.
9. Noise and environmental influences.
10. Physiology relevant to acoustic research (swimbladder).
11. Bioacoustics, attraction (instrumentation).
12. Acoustics used in fishing operations.
13. Oceanographical and geological use of acoustics.
14. Acoustical holography.

The bibliography is based on a search made on 27 May 1981 of the following data bases:

a) Aquatic Sciences and Fisheries Abstracts.

b) Biosis previews.

c) Comprehensive Dissertation Index.

d) NTIS (United States National Technical Information Service)

e) Oceanic Abstracts.

f) INSPEC (Institution of Electrical Engineers)

g) COMPENDEX (Engineering Information, Inc.)

The search yielded approximately 1 750 references, of which a large part were duplicates or not relevant material. Additional references were obtained by scanning the references given in a selection of publications, in particular those of the larger meetings on fisheries acoustics, and the collection of documents built up in FAO. Not every reference could be checked against the original. Wrong citations were a frequent occurrence, which illustrates the need for a sound bibliographic basis. Papers presented at the ICES/FAO Symposium on Fisheries Acoustics held in Bergen, Norway from 21 to 24 June 1982 will be included in a second volume, to be issued in 1986.

Corrections, reprints and suggestions for additional titles, in particular of older papers and grey literature, would be welcome and may be addressed to S.C. Venema, Marine Resources Service (FIRM), FAO, via delle Terme di Caracalla, 00100 Rome, Italy.

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